

Remarks

At the outset and apart from important aspects of the invention as set forth in various dependent claims (discussed in depth below), Applicant submits that the §§ 102(e) and 103(a) rejections of independent claim 1 are improper because they carry the flawed assumption that the Chiu reference (by itself or in the asserted combinations) teaches a specifically-designated percentage of hydrogen peroxide (i.e., 30%) to mean some unspecified level of diluted hydrogen peroxide. Pure hydrogen peroxide has long been established as being stable and, when referring to a chemical formula involving a specifically-designated percentage of hydrogen peroxide (e.g., 30%), such references are taken at face value, rather than some higher percentage due to dilution. Under the law, the Examiner is not permitted (especially without any support whatsoever) to maintain a rejection based on the argument that a specifically-designated percentage of hydrogen peroxide in a chemical formula is understood to mean something entirely different.

The non-final Office Action dated October 17, 2008, indicates that: claims 4 and 6 would be allowable if rewritten in independent form, claims 1, 2 and 7 stand rejected under 35 U.S.C. § 102(e) over the Chiu reference (U.S. Patent No. 7,078,351); claims 14 and 15 stand rejected under 35 U.S.C. § 102(e) over the Verhaverbeke reference (U.S. Patent No. 7,159,599); claims 3, 8, 9 and 11 stand rejected under 35 U.S.C. § 103(a) over the Chiu reference in view of the Basi reference (U.S. Patent No. 4,116,714); claim 5 stands rejected under 35 U.S.C. § 103(a) over the Chiu reference in view of the Uzoh reference (U.S. Patent 6,235, 406); claim 10 stands rejected under 35 U.S.C. § 103(a) over the Chiu reference in view of the Mohindra reference (U.S. Patent No. 6,352,082); and claims 12 and 13 stand rejected under 35 U.S.C. § 103(a) over the Yun reference (U.S. Patent No. 6,635,582) in view of the Chiu reference. Applicant respectfully traverses each of these rejections as explained below, wherein Applicant does not acquiesce to any rejection or averment in this Office Action.

Applicant has rewritten claims 4 and 6 in independent form. As such, these claims should be allowable. Before turning to the other rejections, Applicant notes that it has also rewritten claim 10 in independent form to render this claim also allowable for the reasons that immediately follow.

The § 103(a) rejection of claim 10 is based on a misreading of the relied-upon teachings and based on alleged motivation which would teach away from the asserted combination of teaching. A careful review of these combined teachings reveals that the asserted combination does not correspond to the invention set forth in claim 10 and that the relied-upon portion of the Mohindra reference teaches away from the asserted combination of teachings.

The asserted combination does not correspond to the invention set forth in claim 10 because the asserted combination would not include the claimed rinsing step in connection with completion of the asserted combination -- this claimed aspect is not even alleged in the Office Action. The Office Action acknowledges that the Chiu reference fails to disclose these aspects of claim 10, and the surrounding portions of the Office Action's citation to the Mohindra reference confirm that Mohindra's rinse step is at the beginning, rather than the end, of Mohindra's process. More specifically, the Office Action relies upon the teaching at block 460 of Fig. 4 of the Mohindra reference. Thus, because neither the Chiu reference nor the Mohindra reference teaches the claimed rinsing step in connection with completion, no combination of these references can be reconstructed to allege correspondence to the claimed invention.

The Mohindra reference teaches away from the asserted combination of teachings. According to the Office Action, the combination of these teachings would be motivated "to promote drying of the semiconductor wafer" (Office Action at p.9). However, the skilled artisan would not rely upon the cited teaching in the Mohindra reference to promote drying of the semiconductor wafer. The cited teaching in the Mohindra reference is a step involving immersing in DI water for the purpose of preventing oxygen in the air from contacting the wafer at this early stage of the process. See the Mohindra reference at Col. 10:18-21. This immersion/rinsing is preferably maintained/repeated until gas is introduced at step 450 which is then followed by a separate drying step which lasts for minutes and is described as being unrelated to any possible elevated temperature of the earlier immersion stage. Thus, the Mohindra reference teaches away from the asserted combination of teachings because instead of teaching rinsing "to promote drying of the semiconductor wafer" (Office Action at p.9), the Mohindra reference teaches to rinsing to promote fully wetting the wafer as a

protective coating. Applicant submits that the rejection is improper and must be withdrawn.

Applicant turns now to the rejections of claims 1-3, 5-9 and 11-15. Applicant maintains and incorporates by reference the arguments presented in the previous response. As presented in the previous response, each of these claims is at least distinguishable (*inter alia*) because Chiu fails to disclose cleaning to remove residue after etching using a dilute solution of sulfuric acid in water as claimed.

The Office Action also fails to consider the unexpected results set forth in Applicant's Specification, *e.g.*, at paragraph 0007 of the USPTO's published version. These surprising results further support the patentability of Applicant's claimed invention and are to be considered according to the law under § 103(a) (see M.P.E.P. § 716.02(c) ("Evidence of unexpected results must be weighed against evidence supporting *prima facie* obviousness in making a final determination of the obviousness of the claimed invention.")). Applicant submits that this evidence further rebuts each of the § 103(a) rejections (including that of claim 10).

In view of the remarks above, Applicant believes that each of the rejections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Peter Zawilski, of NXP Corporation at (408) 474-9063 (or the undersigned).

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